SEQUENCE LISTING

<110> TURCK, JUTTA
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acgaaggtaa cccacagtga ctcacaccac aagtactaga atgcaagctg ttgcggtgag   240

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acc acc acc gac acc ggc ccc aag ccg ggc agt gag gcc gcc gcc ctg        345
Thr Thr Thr Asp Thr Gly Pro Lys Pro Gly Ser Glu Ala Ala Ala Leu
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ctc gcc aat gtc cgc acc tcg ggg gcg cgg ctg tcc tcc gcg ttg tac        393
Leu Ala Asn Val Arg Thr Ser Gly Ala Arg Leu Ser Ser Ala Leu Tyr
            20              25              30

gac att ctg aag aac cgg ctg ctc gaa ggg cgc tat gcg gca ggc gag        441
Asp Ile Leu Lys Asn Arg Leu Leu Glu Gly Arg Tyr Ala Ala Gly Glu
            35              40              45

aag atc gtc gtc gag tcg atc cgg caa gag ttc ggg gtg agc aag cag        489
Lys Ile Val Val Glu Ser Ile Arg Gln Glu Phe Gly Val Ser Lys Gln
50              55              60              65

ccc gtc atg gac gct ctg cgc cgc ctg tcc agc gac aag ctg gtc cac        537
Pro Val Met Asp Ala Leu Arg Arg Leu Ser Ser Asp Lys Leu Val His
            70              75              80

atc gtt ccc cag gtc ggt tgc gag gtc gtc tcc tac gcc ccg cgc gaa        585
Ile Val Pro Gln Val Gly Cys Glu Val Val Ser Tyr Ala Pro Arg Glu
            85              90              95

gtg gaa gac ttc tac acc ctg ttc ggc ggt ttc gaa ggg acc atc gcc        633
Val Glu Asp Phe Tyr Thr Leu Phe Gly Gly Phe Glu Gly Thr Ile Ala
            100             105             110

gcg gta gcg gcc tcc cgg cgg acc gag gcc cag ttg ctg gag ctg gac        681
Ala Val Ala Ala Ser Arg Arg Thr Glu Ala Gln Leu Leu Glu Leu Asp
            115             120             125

ctg atc tcg gcg cgg gtc gac gcc ctg atc acc tcc cac gac ccg gtg        729
Leu Ile Ser Ala Arg Val Asp Ala Leu Ile Thr Ser His Asp Pro Val
130             135             140             145

gtc cgc gcc cgc ggg tac cgc gtg cac aac cgg gag ttc cat gcg gcc        777
Val Arg Ala Arg Gly Tyr Arg Val His Asn Arg Glu Phe His Ala Ala
            150             155             160

atc cac gcg atg gcg cac tcg cgg atc atg gag gag acc agc cag cga        825
Ile His Ala Met Ala His Ser Arg Ile Met Glu Glu Thr Ser Gln Arg
            165             170             175

atg tgg gat ctg tcg gac ttc ttg atc aac acc acc ggc atc acc aac        873
Met Trp Asp Leu Ser Asp Phe Leu Ile Asn Thr Thr Gly Ile Thr Asn
            180             185             190

ccg ctc tcg agc gca ctg ccc gac cgg cag cat gac cac cac gaa atc        921
Pro Leu Ser Ser Ala Leu Pro Asp Arg Gln His Asp His His Glu Ile
            195             200             205

acc gag gcc atc cgc aac cgt gac gca gct gcc gcc cgc gag gcc atg        969
Thr Glu Ala Ile Arg Asn Arg Asp Ala Ala Ala Ala Arg Glu Ala Met
210             215             220             225
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gaa cgc cac atc gtc ggc acc atc gca gta atc cgc gac gaa tcc aac        1017
Glu Arg His Ile Val Gly Thr Ile Ala Val Ile Arg Asp Glu Ser Asn
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gcc cag ctg ccg agc tag accccgatac ccgggccatc gaccggctcc               1065
Ala Gln Leu Pro Ser
            245

gctatcgcgc cacctacgcc gaggggggac tctcggccgt agcgctgcag acgatccacc      1125

ggcaccctcc acgctgaccc ctgtctcgcc ctagagggcc ggcgcgccgt cgatcacctt      1185

taccctcatc cagagacttg cgtcaccctc tatgcccgag tagcgtctga actagacgtc      1245

tagcattcta gttga gtg ctc cct ctc gaa gat tct cca gag aac ccc tct       1296
                  Val Leu Pro Leu Glu Asp Ser Pro Glu Asn Pro Ser
                            250                 255

cga aca tcc cca gaa gaa agg agc ggc cat gac gac cgc ttc gca cgc        1344
Arg Thr Ser Pro Glu Glu Arg Ser Gly His Asp Asp Arg Phe Ala Arg
    260                 265                 270

atc gtc ctt cgg ggc acg agc cca ctt ccg ccc aca gat cgg gga agc        1392
Ile Val Leu Arg Gly Thr Ser Pro Leu Pro Pro Thr Asp Arg Gly Ser
275                 280                 285                 290

ccg acc gtg agc acc aca cct acc tcc ccg acg aag acc tca ccg ctg        1440
Pro Thr Val Ser Thr Thr Pro Thr Ser Pro Thr Lys Thr Ser Pro Leu
                295                 300                 305

cgg gta gcg atg gcc agc ttc atc ggt acc acc gtc gag tac tac gac        1488
Arg Val Ala Met Ala Ser Phe Ile Gly Thr Thr Val Glu Tyr Tyr Asp
            310                 315                 320

ttc ttc atc tac ggc acc gcg gcc gcg ctg gta ttc cct gag ttg ttc        1536
Phe Phe Ile Tyr Gly Thr Ala Ala Ala Leu Val Phe Pro Glu Leu Phe
            325                 330                 335

ttc ccg gat gtc tcg tcc gcg atc gga atc ctg ttg tcg ttc gcg acc        1584
Phe Pro Asp Val Ser Ser Ala Ile Gly Ile Leu Leu Ser Phe Ala Thr
            340                 345                 350

ttc agc gtt ggg ttc ctc gcc cgc ccg ctg ggt ggc ata gtg ttc ggg        1632
Phe Ser Val Gly Phe Leu Ala Arg Pro Leu Gly Gly Ile Val Phe Gly
355                 360                 365                 370

cac ttc ggt gac cgg gtc ggc cgc aag cag atg ctg gtg atc tcc ctg        1680
His Phe Gly Asp Arg Val Gly Arg Lys Gln Met Leu Val Ile Ser Leu
            375                 380                 385

gtc gga atg ggc tcg gcc acc gta ctg atg gga ttg ttg ccc ggt tac        1728
Val Gly Met Gly Ser Ala Thr Val Leu Met Gly Leu Leu Pro Gly Tyr
            390                 395                 400

gcc caa atc ggg atc gcc gcc ccc atc ctg ctg acc ctg ctg cgc ctg        1776
Ala Gln Ile Gly Ile Ala Ala Pro Ile Leu Leu Thr Leu Leu Arg Leu
            405                 410                 415
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gtg cag ggc ttt gcc gtc ggc ggc gag tgg ggt gga gcc acc ctg atg        1824
Val Gln Gly Phe Ala Val Gly Gly Glu Trp Gly Gly Ala Thr Leu Met
    420             425             430

gcc gtc gag cac gcc ccc acc gcg aag aag ggc ttt ttc gga tcc ttc        1872
Ala Val Glu His Ala Pro Thr Ala Lys Lys Gly Phe Phe Gly Ser Phe
435             440             445             450

tcc cag atg ggg gca ccc gcc ggg acc agc gtc gca acc ctg gcg ttc        1920
Ser Gln Met Gly Ala Pro Ala Gly Thr Ser Val Ala Thr Leu Ala Phe
            455             460             465

ttc gcg gtc tcc caa ttg ccc gac gag cag ttc ctg agt tgg ggc tgg        1968
Phe Ala Val Ser Gln Leu Pro Asp Glu Gln Phe Leu Ser Trp Gly Trp
            470             475             480

cga ctg ccg ttc ctg ttc agc gcg gtg ctg atc gtg atc ggg ctg ttc        2016
Arg Leu Pro Phe Leu Phe Ser Ala Val Leu Ile Val Ile Gly Leu Phe
        485             490             495

att cgc ctg tcc ctg gcc gaa agc ccc gac ttc gcc gag gtg aag gca        2064
Ile Arg Leu Ser Leu Ala Glu Ser Pro Asp Phe Ala Glu Val Lys Ala
    500             505             510

cag agc gcc gtg gtg cga atg ccg atc gcc gaa gcg ttc cgc aag cac        2112
Gln Ser Ala Val Val Arg Met Pro Ile Ala Glu Ala Phe Arg Lys His
515             520             525             530

tgg aag gaa att ctc ctc atc gcg ggc acc tac ctg tcc caa gga gtg        2160
Trp Lys Glu Ile Leu Leu Ile Ala Gly Thr Tyr Leu Ser Gln Gly Val
            535             540             545

ttc gcc tat atc tgc atg gcc tac ctc gtc tcc tac ggc acc acc gtc        2208
Phe Ala Tyr Ile Cys Met Ala Tyr Leu Val Ser Tyr Gly Thr Thr Val
            550             555             560

gcg ggg atc agc cgc acc ttc gcc ctg gcc gga gta ttc gtc gcc ggc        2256
Ala Gly Ile Ser Arg Thr Phe Ala Leu Ala Gly Val Phe Val Ala Gly
        565             570             575

atc gtc gcc gtc ctc ctc tac ctc gtg ttc ggc gct ctg tcc gac act        2304
Ile Val Ala Val Leu Leu Tyr Leu Val Phe Gly Ala Leu Ser Asp Thr
    580             585             590

ttc ggc cgc aag acc atg tac ctg ctc ggc gcc gcc gcg atg ggt gtg        2352
Phe Gly Arg Lys Thr Met Tyr Leu Leu Gly Ala Ala Ala Met Gly Val
595             600             605             610

gtg atc gcc ccc gcc ttc gca ctg atc aac acc ggc aac ccg tgg ctg        2400
Val Ile Ala Pro Ala Phe Ala Leu Ile Asn Thr Gly Asn Pro Trp Leu
            615             620             625

ttc atg gcc gcg cag gtg ctg gtc ttc gga att gca atg gcc ccc gcc        2448
Phe Met Ala Ala Gln Val Leu Val Phe Gly Ile Ala Met Ala Pro Ala
            630             635             640
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gcc ggc gtg aca ggc tcc ctg ttc acg atg gtc ttc gac gcg gac gtg    2496
Ala Gly Val Thr Gly Ser Leu Phe Thr Met Val Phe Asp Ala Asp Val
        645             650             655

cgc tac agc ggt gtc tct atc ggc tac acc atc tcc cag gtc gcc ggc    2544
Arg Tyr Ser Gly Val Ser Ile Gly Tyr Thr Ile Ser Gln Val Ala Gly
        660             665             670

tcc gcg ttc gcc ccg acg atc gcg acc gcc ttg tac gcc tcc acc aac    2592
Ser Ala Phe Ala Pro Thr Ile Ala Thr Ala Leu Tyr Ala Ser Thr Asn
675             680             685             690

acc agc aac tcg atc gtg acc tac ctg ctg atc gtc tcg gcc atc tcg    2640
Thr Ser Asn Ser Ile Val Thr Tyr Leu Leu Ile Val Ser Ala Ile Ser
                695             700             705

atc gtc tcg gtg atc ctg ctg ccc ggc ggc tgg ggg cgc aag ggc gct    2688
Ile Val Ser Val Ile Leu Leu Pro Gly Gly Trp Gly Arg Lys Gly Ala
                710             715             720

gcg agc cag ctc act cgc gac cag gcc acc tcc aca ccg aaa atg cct    2736
Ala Ser Gln Leu Thr Arg Asp Gln Ala Thr Ser Thr Pro Lys Met Pro
        725             730             735

gac acc gaa aca ttt tcg act cgg aca gtt ccg gac acc gca gca tcc    2784
Asp Thr Glu Thr Phe Ser Thr Arg Thr Val Pro Asp Thr Ala Ala Ser
        740             745             750

ctg cgc gtc ctc gac aag tga a gtg atg aca gac atg agt gac cac gac  2833
Leu Arg Val Leu Asp Lys      Val Met Thr Asp Met Ser Asp His Asp
755             760                         765

cgc acc tcc tac gac acc gac gtc gtg atc gtc ggc ctc ggc ccc gcc    2881
Arg Thr Ser Tyr Asp Thr Asp Val Val Ile Val Gly Leu Gly Pro Ala
770             775             780             785

ggt ggc aca gcg gcg ctt gcc ctg gcc agc tac ggc atc cgc gtt cac    2929
Gly Gly Thr Ala Ala Leu Ala Leu Ala Ser Tyr Gly Ile Arg Val His
                790             795             800

gcc gtc tcg atg ttc ccc tgg gtg gcg aac tcg ccg cgc gcg cac atc    2977
Ala Val Ser Met Phe Pro Trp Val Ala Asn Ser Pro Arg Ala His Ile
                805             810             815

acc aac cag cgc gcc gtc gaa gtg ctg cgt gac ctg ggc gtc gaa gac    3025
Thr Asn Gln Arg Ala Val Glu Val Leu Arg Asp Leu Gly Val Glu Asp
        820             825             830

gag gcg cgc aac tac gcc acc ccg tgg gac cag atg ggc gac acg ctg    3073
Glu Ala Arg Asn Tyr Ala Thr Pro Trp Asp Gln Met Gly Asp Thr Leu
        835             840             845

ttc acc acg agc ctg gcc ggc gag gag atc gtc cgg atg cag acc tgg    3121
Phe Thr Thr Ser Leu Ala Gly Glu Glu Ile Val Arg Met Gln Thr Trp
850             855             860             865
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ggt acg ggc gat atc cgc tac ggg gac tac ctg tcc gga agc ccc tgc    3169
Gly Thr Gly Asp Ile Arg Tyr Gly Asp Tyr Leu Ser Gly Ser Pro Cys
            870                 875                 880

acg atg ctc gac att ccg cag ccc ctg atg gag ccg gtg ctg atc aag    3217
Thr Met Leu Asp Ile Pro Gln Pro Leu Met Glu Pro Val Leu Ile Lys
            885                 890                 895

aac gcc gcc gaa cgt ggt gcg gtc atc agc ttc aac acc gaa tac ctc    3265
Asn Ala Ala Glu Arg Gly Ala Val Ile Ser Phe Asn Thr Glu Tyr Leu
            900                 905                 910

gac cac gcc cag gac gag gac ggg gtg acc gtc cgg ttc cgc gac gtc    3313
Asp His Ala Gln Asp Glu Asp Gly Val Thr Val Arg Phe Arg Asp Val
            915                 920                 925

cgc tcg ggc acc gtg ttc acc cag cga gcc cgc ttc ctg ctc ggt ttc    3361
Arg Ser Gly Thr Val Phe Thr Gln Arg Ala Arg Phe Leu Leu Gly Phe
930                 935                 940                 945

gac ggc gca cga tcg aag atc gcc gaa cag atc ggg ctt ccg ttc gaa    3409
Asp Gly Ala Arg Ser Lys Ile Ala Glu Gln Ile Gly Leu Pro Phe Glu
            950                 955                 960

ggt gaa ctc gcc cgc gcc ggt acc gcg tac atc ctg ttc aac gcg gac    3457
Gly Glu Leu Ala Arg Ala Gly Thr Ala Tyr Ile Leu Phe Asn Ala Asp
            965                 970                 975

ctg agc aaa tat gtc gct cat cgg ccg agc atc ttg cac tgg atc gtc    3505
Leu Ser Lys Tyr Val Ala His Arg Pro Ser Ile Leu His Trp Ile Val
            980                 985                 990

aac tcg aag gcc ggt ttc ggt  gag atc ggc atg ggt  ctg ctg cgc gcg    3553
Asn Ser Lys Ala Gly Phe Gly  Glu Ile Gly Met Gly  Leu Leu Arg Ala
            995                 1000                1005

atc  cga ccg tgg gac cag  tgg atc gcc ggc tgg  ggc ttc gac atg    3598
Ile  Arg Pro Trp Asp Gln  Trp Ile Ala Gly Trp  Gly Phe Asp Met
1010                1015                 1020

gcg  aac ggc gag ccg gat  gtc tcc gac gac gtt  gtc ctc gaa cag    3643
Ala  Asn Gly Glu Pro Asp  Val Ser Asp Asp Val  Val Leu Glu Gln
1025                1030                 1035

atc  cgg acc ctc gtc ggc  gac ccg cac ctg gac  gtc gag atc gtg    3688
Ile  Arg Thr Leu Val Gly  Asp Pro His Leu Asp  Val Glu Ile Val
1040                1045                 1050

tcg  agg tcc ttc tgg tac  gtc aac cgg cag tgg  gct gag cac tac    3733
Ser  Arg Ser Phe Trp Tyr  Val Asn Arg Gln Trp  Ala Glu His Tyr
1055                1060                 1065

cag  tcc ggt cga gtg ttc  tgc ggc ggc gac gcg  gtg cac cgg cat    3778
Gln  Ser Gly Arg Val Phe  Cys Gly Gly Asp Ala  Val His Arg His
1070                1075                 1080
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ccg ccg agc agc ggg ctg   ggc tcg aac acg tcc   atg cag gac gcg        3823
Pro Pro Ser Ser Gly Leu   Gly Ser Asn Thr Ser   Met Gln Asp Ala
1085             1090                 1095

ttc aac ctg gca tgg aag   atc gcg ttc gtc gtg   aag ggg tat gca        3868
Phe Asn Leu Ala Trp Lys   Ile Ala Phe Val Val   Lys Gly Tyr Ala
1100             1105                 1110

gga ccg ggt ctg ctc gag   tcc tac tct cct gag   cgt gtt ccg gtc        3913
Gly Pro Gly Leu Leu Glu   Ser Tyr Ser Pro Glu   Arg Val Pro Val
1115             1120                 1125

ggc aaa cag atc gtc gct   cgc gcc aac cag tcc   cgc aag gac tac        3958
Gly Lys Gln Ile Val Ala   Arg Ala Asn Gln Ser   Arg Lys Asp Tyr
1130             1135                 1140

gcc ggg ctg cgc gaa tgg   ttc gat cac gag agc   gac gac ccg gtc        4003
Ala Gly Leu Arg Glu Trp   Phe Asp His Glu Ser   Asp Asp Pro Val
1145             1150                 1155

gcc gcc ggc ctg gca aag   ttg aag gaa ccc tcg   tcc gaa ggt gtt        4048
Ala Ala Gly Leu Ala Lys   Leu Lys Glu Pro Ser   Ser Glu Gly Val
1160             1165                 1170

gct ctg cgt gag cgg ctg   tac gag gcg ctg gag   gtg aag aac gcc        4093
Ala Leu Arg Glu Arg Leu   Tyr Glu Ala Leu Glu   Val Lys Asn Ala
1175             1180                 1185

gaa ttc aac gcc cag ggc   gtc gaa ctc aac cag   cgc tac acc tcg        4138
Glu Phe Asn Ala Gln Gly   Val Glu Leu Asn Gln   Arg Tyr Thr Ser
1190             1195                 1200

tcc gcg gtc gtt ccc gac   ccc gag gcg ggc gag   gaa gtg tgg gtg        4183
Ser Ala Val Val Pro Asp   Pro Glu Ala Gly Glu   Glu Val Trp Val
1205             1210                 1215

cgc gat cgt gag ctg tac   ctg cag gcc acc acc   cgg ccg ggc gcg        4228
Arg Asp Arg Glu Leu Tyr   Leu Gln Ala Thr Thr   Arg Pro Gly Ala
1220             1225                 1230

aag ctg ccg cat gcg tgg   ctg gtc ggc gcc gac   gga acc cgc atc        4273
Lys Leu Pro His Ala Trp   Leu Val Gly Ala Asp   Gly Thr Arg Ile
1235             1240                 1245

tcc acc ctc gac gtc acc   ggc aag gga atg atg   acc ctg ctg acc        4318
Ser Thr Leu Asp Val Thr   Gly Lys Gly Met Met   Thr Leu Leu Thr
1250             1255                 1260

gga ctc ggc ggc cag gca   tgg aag cgt gcc gcc   gcc aaa ctc gac        4363
Gly Leu Gly Gly Gln Ala   Trp Lys Arg Ala Ala   Ala Lys Leu Asp
1265             1270                 1275

ctg ccg ttc ctg cgg acc   gtc gtt gtc ggc gaa   ccc ggc acc atc        4408
Leu Pro Phe Leu Arg Thr   Val Val Val Gly Glu   Pro Gly Thr Ile
1280             1285                 1290
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gac cct tac gga tac tgg  cgg cgg gtc cgc gac  atc gac gag gcc      4453
Asp Pro Tyr Gly Tyr Trp  Arg Arg Val Arg Asp  Ile Asp Glu Ala
1295             1300                1305

ggc gcc ctg ctc gtg cgg  ccc gac ggc tac gtc  gcg tgg cga cac      4498
Gly Ala Leu Leu Val Arg  Pro Asp Gly Tyr Val  Ala Trp Arg His
1310             1315                1320

agt gct ccg gtc tgg gac  gac acc gaa gcg ctc  acc agc ctc gag      4543
Ser Ala Pro Val Trp Asp  Asp Thr Glu Ala Leu  Thr Ser Leu Glu
1325             1330                1335

aac gct ctc acc gcg gtc  ctc gac cac tcg gcc  agc gac aac ggg      4588
Asn Ala Leu Thr Ala Val  Leu Asp His Ser Ala  Ser Asp Asn Gly
1340             1345                1350

aac ccg agc ggc aca aac  gag ccg cag tac agc  acc cgg gcc gtg      4633
Asn Pro Ser Gly Thr Asn  Glu Pro Gln Tyr Ser  Thr Arg Ala Val
1355             1360                1365

ccg atc gtc gtt ccg cac  gtt acc gcc gag gat  gca gca cca gct      4678
Pro Ile Val Val Pro His  Val Thr Ala Glu Asp  Ala Ala Pro Ala
1370             1375                1380

tcc gcc acc cgc acc acc  aca gtc gag gga gag  aac cga tga          4720
Ser Ala Thr Arg Thr Thr  Thr Val Glu Gly Glu  Asn Arg
1385             1390                1395

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                                                Met Pro Val  Ala Leu
                                                             1400

tgc gcg atg  tcg cac tcc ccc ctg  atg gga cgc aac gac  ccc gaa       5780
Cys Ala Met  Ser His Ser Pro Leu  Met Gly Arg Asn Asp  Pro Glu
        1405                 1410                 1415

cag gaa gtc  atc gac gcc gtc gac  gcc gca ttc gac cac  gcg cgc       5825
Gln Glu Val  Ile Asp Ala Val Asp  Ala Ala Phe Asp His  Ala Arg
        1420                 1425                 1430

cgg ttc gtc  gcc gac ttc gcc ccc  gat ctc atc gtc atc  ttc gcc       5870
Arg Phe Val  Ala Asp Phe Ala Pro  Asp Leu Ile Val Ile  Phe Ala
        1435                 1440                 1445

ccc gac cac  tac aac ggc gtc ttc  tac gac ctg ctg ccg  ccg ttc       5915
Pro Asp His  Tyr Asn Gly Val Phe  Tyr Asp Leu Leu Pro  Pro Phe
        1450                 1455                 1460

tgt atc ggt  gcc gcc gcg cag tcc  gtc ggc gac tac ggc  acc gaa       5960
Cys Ile Gly  Ala Ala Ala Gln Ser  Val Gly Asp Tyr Gly  Thr Glu
        1465                 1470                 1475

gcc ggc cct  ctc gac gtc gac cgt  gac gcc gcc tac gca  gtc gcc       6005
Ala Gly Pro  Leu Asp Val Asp Arg  Asp Ala Ala Tyr Ala  Val Ala
        1480                 1485                 1490

cgc gac gtc  ctc gac agc ggc atc  gac gtc gca ttc tcc  gaa cgc       6050
Arg Asp Val  Leu Asp Ser Gly Ile  Asp Val Ala Phe Ser  Glu Arg
        1495                 1500                 1505

atg cac gtc  gac cac gga ttc gcc  caa gca ctc caa ttg  ctg gtc       6095
Met His Val  Asp His Gly Phe Ala  Gln Ala Leu Gln Leu  Leu Val
        1510                 1515                 1520

gga tcg atc  acc gcc gtg ccg acc  gtg ccg atc ttc atc  aat tcg       6140
Gly Ser Ile  Thr Ala Val Pro Thr  Val Pro Ile Phe Ile  Asn Ser
        1525                 1530                 1535

gtc gcc gaa  ccg ctc ggc ccg gtc  agc cgg gta cgg ctg  ctc ggc       6185
Val Ala Glu  Pro Leu Gly Pro Val  Ser Arg Val Arg Leu  Leu Gly
        1540                 1545                 1550

gag gcg gtc  ggg cgg gcc gct gcc  aag ctg gac aag cgt  gtg ctg       6230
Glu Ala Val  Gly Arg Ala Ala Ala  Lys Leu Asp Lys Arg  Val Leu
        1555                 1560                 1565

ttc gtc gga  tcc ggc ggc ctg tcc  cac gac ccg ccg gtc  ccg cag       6275
Phe Val Gly  Ser Gly Gly Leu Ser  His Asp Pro Pro Val  Pro Gln
        1570                 1575                 1580

ttc gcc acc  gcg cca gag gaa gtg  cgc gag cgg ttg atc  gac ggc       6320
Phe Ala Thr  Ala Pro Glu Glu Val  Arg Glu Arg Leu Ile  Asp Gly
        1585                 1590                 1595
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cgc aat ccc  agt gcc gcc gaa cgt  gat gcc cgc gaa cag  cgc gtc      6365
Arg Asn Pro  Ser Ala Ala Glu Arg  Asp Ala Arg Glu Gln  Arg Val
        1600                 1605                 1610


atc acc gcc  ggg cgg gac ttc gcc  gcc ggc acc gcc gcc  atc cag      6410
Ile Thr Ala  Gly Arg Asp Phe Ala  Ala Gly Thr Ala Ala  Ile Gln
        1615                 1620                 1625


cca ctg aac  ccc gaa tgg gac cgg  cac ctg ctc gac gtc  ctc gcc      6455
Pro Leu Asn  Pro Glu Trp Asp Arg  His Leu Leu Asp Val  Leu Ala
        1630                 1635                 1640


tcc ggc gac  ctc gag cag atc gac  gcg tgg acc aac gac  tgg ttc      6500
Ser Gly Asp  Leu Glu Gln Ile Asp  Ala Trp Thr Asn Asp  Trp Phe
        1645                 1650                 1655


gtc gaa cag  gcc gga cac tcc tcc  cac gaa gtg cgc acc  tgg atc      6545
Val Glu Gln  Ala Gly His Ser Ser  His Glu Val Arg Thr  Trp Ile
        1660                 1665                 1670


gcc gcg tac  gcg gca atg agc gcc  gcc ggg aag tac cgc  gtc acc      6590
Ala Ala Tyr  Ala Ala Met Ser Ala  Ala Gly Lys Tyr Arg  Val Thr
        1675                 1680                 1685


tcg acc ttc  tac cgc gaa atc cac  gag tgg ata gca gga  ttc ggg      6635
Ser Thr Phe  Tyr Arg Glu Ile His  Glu Trp Ile Ala Gly  Phe Gly
        1690                 1695                 1700


att act acc  gcc gtc gcc gtc gac  gaa tag accccgccgc tcccgccccg     6685
Ile Thr Thr  Ala Val Ala Val Asp  Glu
        1705                 1710
```

```
cagtcccaac gaagggtggc cccggatgac ctccgtccgc ccgtgctcgc cgtcggtgaa     6745

cgcgggctgg tcggtgggca ggaagacctc atcgccgaca tcgccctcga cctcgcagct     6805

cgtcagtagg aatgcgcacg ggccgacgag tcgcgctggt caccggggcc agccgcggca     6865

tcggggcggc catcgcagat gcggtggccg cctccggtgc cgccgtaatc gtccactacg     6925

gatccgatcg gacggccgcc gctgcggtgt cgacggcatc acggctgccg ggggcctcgc     6985

ggctgcggtc caggccgacc tgtcccgacc cgaggggcct gaagagctga tgcgggagtt     7045

cgactccgcg ctcgacggtc tcgggctcga ccgagggctc gacatcctcg tcaacaacgc     7105

cggaatcagt cggcgcggag cgctcgagcg cgtcactgtc gaggatttcg accgtctggt     7165

cgcactcaac cagcgcgccc cgttcttcgt gactcggcat gccctgcccc ggatgcacga     7225

cggcggtcgc atcgtcaaca tttcctccgg atccgcccgc tacgccagac ccgacgtcat     7285

cagctacgcc atgaccaagg gggcgatcga ggtgctcacc cgcgccctcg ccgtagacgt     7345

cggcgaacga ggcatcaccg ccaacgccgt ggcgccggcc gcgctcgata ccgacatgaa     7405

cgcgcactgg cttcgcggtg acgaccatgc ccgcaccacc gccgcgtcca ccactgcact     7465
```

gcgaaaactc gccaccgcgg aggacatcgc cgcgatcgtg gccttcctcg tcagcgccgc   7525

cgccggtgcg atcaccgggc aggtcatcga cgccaccaac ggcaaccggc tctaaccaga   7585

acttacccgg tccc   7599

\<210\> 2
\<211\> 246
\<212\> PRT
\<213\> Rhodococcus sp.

\<400\> 2

Met	Thr	Thr	Thr	Asp	Thr	Gly	Pro	Lys	Pro	Gly	Ser	Glu	Ala	Ala	Ala
1				5					10					15	

Leu	Leu	Ala	Asn	Val	Arg	Thr	Ser	Gly	Ala	Arg	Leu	Ser	Ser	Ala	Leu
		20					25					30			

Tyr	Asp	Ile	Leu	Lys	Asn	Arg	Leu	Leu	Glu	Gly	Arg	Tyr	Ala	Ala	Gly
	35					40					45				

Glu	Lys	Ile	Val	Val	Glu	Ser	Ile	Arg	Gln	Glu	Phe	Gly	Val	Ser	Lys
	50					55					60				

Gln	Pro	Val	Met	Asp	Ala	Leu	Arg	Arg	Leu	Ser	Ser	Asp	Lys	Leu	Val
65					70					75					80

His	Ile	Val	Pro	Gln	Val	Gly	Cys	Glu	Val	Val	Ser	Tyr	Ala	Pro	Arg
			85					90					95		

Glu	Val	Glu	Asp	Phe	Tyr	Thr	Leu	Phe	Gly	Gly	Phe	Glu	Gly	Thr	Ile
			100					105					110		

Ala	Ala	Val	Ala	Ala	Ser	Arg	Arg	Thr	Glu	Ala	Gln	Leu	Leu	Glu	Leu
		115					120					125			

Asp	Leu	Ile	Ser	Ala	Arg	Val	Asp	Ala	Leu	Ile	Thr	Ser	His	Asp	Pro
	130					135					140				

Val	Val	Arg	Ala	Arg	Gly	Tyr	Arg	Val	His	Asn	Arg	Glu	Phe	His	Ala
145					150					155					160

Ala	Ile	His	Ala	Met	Ala	His	Ser	Arg	Ile	Met	Glu	Glu	Thr	Ser	Gln
			165					170					175		

Arg	Met	Trp	Asp	Leu	Ser	Asp	Phe	Leu	Ile	Asn	Thr	Thr	Gly	Ile	Thr
		180					185					190			

Asn	Pro	Leu	Ser	Ser	Ala	Leu	Pro	Asp	Arg	Gln	His	Asp	His	His	Glu
		195					200					205			

Ile	Thr	Glu	Ala	Ile	Arg	Asn	Arg	Asp	Ala	Ala	Ala	Ala	Arg	Glu	Ala
	210					215					220				

Met	Glu	Arg	His	Ile	Val	Gly	Thr	Ile	Ala	Val	Ile	Arg	Asp	Glu	Ser
225					230					235					240

Asn Ala Gln Leu Pro Ser
                245

<210> 3
<211> 514
<212> PRT
<213> Rhodococcus sp.

<400> 3
Val Leu Pro Leu Glu Asp Ser Pro Glu Asn Pro Ser Arg Thr Ser Pro
1   5   10   15

Glu Glu Arg Ser Gly His Asp Asp Arg Phe Ala Arg Ile Val Leu Arg
            20   25   30

Gly Thr Ser Pro Leu Pro Pro Thr Asp Arg Gly Ser Pro Thr Val Ser
        35   40   45

Thr Thr Pro Thr Ser Pro Thr Lys Thr Ser Pro Leu Arg Val Ala Met
        50   55   60

Ala Ser Phe Ile Gly Thr Thr Val Glu Tyr Tyr Asp Phe Phe Ile Tyr
65   70   75   80

Gly Thr Ala Ala Ala Leu Val Phe Pro Glu Leu Phe Phe Pro Asp Val
                85   90   95

Ser Ser Ala Ile Gly Ile Leu Leu Ser Phe Ala Thr Phe Ser Val Gly
                100   105   110

Phe Leu Ala Arg Pro Leu Gly Gly Ile Val Phe Gly His Phe Gly Asp
            115   120   125

Arg Val Gly Arg Lys Gln Met Leu Val Ile Ser Leu Val Gly Met Gly
        130   135   140

Ser Ala Thr Val Leu Met Gly Leu Leu Pro Gly Tyr Ala Gln Ile Gly
145   150   155   160

Ile Ala Ala Pro Ile Leu Leu Thr Leu Leu Arg Leu Val Gln Gly Phe
                165   170   175

Ala Val Gly Gly Glu Trp Gly Gly Ala Thr Leu Met Ala Val Glu His
            180   185   190

Ala Pro Thr Ala Lys Lys Gly Phe Phe Gly Ser Phe Ser Gln Met Gly
        195   200   205

Ala Pro Ala Gly Thr Ser Val Ala Thr Leu Ala Phe Phe Ala Val Ser
        210   215   220

Gln Leu Pro Asp Glu Gln Phe Leu Ser Trp Gly Trp Arg Leu Pro Phe
225   230   235   240

Leu Phe Ser Ala Val Leu Ile Val Ile Gly Leu Phe Ile Arg Leu Ser
                245   250   255

Leu Ala Glu Ser Pro Asp Phe Ala Glu Val Lys Ala Gln Ser Ala Val
         260   265   270

Val Arg Met Pro Ile Ala Glu Ala Phe Arg Lys His Trp Lys Glu Ile
         275   280   285

Leu Leu Ile Ala Gly Thr Tyr Leu Ser Gln Gly Val Phe Ala Tyr Ile
         290   295   300

Cys Met Ala Tyr Leu Val Ser Tyr Gly Thr Thr Val Ala Gly Ile Ser
305   310   315   320

Arg Thr Phe Ala Leu Ala Gly Val Phe Val Ala Gly Ile Val Ala Val
         325   330   335

Leu Leu Tyr Leu Val Phe Gly Ala Leu Ser Asp Thr Phe Gly Arg Lys
         340   345   350

Thr Met Tyr Leu Leu Gly Ala Ala Ala Met Gly Val Val Ile Ala Pro
         355   360   365

Ala Phe Ala Leu Ile Asn Thr Gly Asn Pro Trp Leu Phe Met Ala Ala
     370   375   380

Gln Val Leu Val Phe Gly Ile Ala Met Ala Pro Ala Ala Gly Val Thr
385   390   395   400

Gly Ser Leu Phe Thr Met Val Phe Asp Ala Asp Val Arg Tyr Ser Gly
             405   410   415

Val Ser Ile Gly Tyr Thr Ile Ser Gln Val Ala Gly Ser Ala Phe Ala
             420   425   430

Pro Thr Ile Ala Thr Ala Leu Tyr Ala Ser Thr Asn Thr Ser Asn Ser
         435   440   445

Ile Val Thr Tyr Leu Leu Ile Val Ser Ala Ile Ser Ile Val Ser Val
     450   455   460

Ile Leu Leu Pro Gly Gly Trp Gly Arg Lys Gly Ala Ala Ser Gln Leu
465   470   475   480

Thr Arg Asp Gln Ala Thr Ser Thr Pro Lys Met Pro Asp Thr Glu Thr
             485   490   495

Phe Ser Thr Arg Thr Val Pro Asp Thr Ala Ala Ser Leu Arg Val Leu
         500   505   510

Asp Lys

<210> 4
<211> 637
<212> PRT
<213> Rhodococcus sp.

<400> 4

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Val Met Thr Asp Met Ser Asp His Asp Arg Thr Ser Tyr Asp Thr Asp
1               5               10              15

Val Val Ile Val Gly Leu Gly Pro Ala Gly Gly Thr Ala Ala Leu Ala
            20              25              30

Leu Ala Ser Tyr Gly Ile Arg Val His Ala Val Ser Met Phe Pro Trp
        35              40              45

Val Ala Asn Ser Pro Arg Ala His Ile Thr Asn Gln Arg Ala Val Glu
    50              55              60

Val Leu Arg Asp Leu Gly Val Glu Asp Glu Ala Arg Asn Tyr Ala Thr
65              70              75              80

Pro Trp Asp Gln Met Gly Asp Thr Leu Phe Thr Thr Ser Leu Ala Gly
            85              90              95

Glu Glu Ile Val Arg Met Gln Thr Trp Gly Thr Gly Asp Ile Arg Tyr
            100             105             110

Gly Asp Tyr Leu Ser Gly Ser Pro Cys Thr Met Leu Asp Ile Pro Gln
        115             120             125

Pro Leu Met Glu Pro Val Leu Ile Lys Asn Ala Ala Glu Arg Gly Ala
    130             135             140

Val Ile Ser Phe Asn Thr Glu Tyr Leu Asp His Ala Gln Asp Glu Asp
145             150             155             160

Gly Val Thr Val Arg Phe Arg Asp Val Arg Ser Gly Thr Val Phe Thr
            165             170             175

Gln Arg Ala Arg Phe Leu Leu Gly Phe Asp Gly Ala Arg Ser Lys Ile
        180             185             190

Ala Glu Gln Ile Gly Leu Pro Phe Glu Gly Glu Leu Ala Arg Ala Gly
    195             200             205

Thr Ala Tyr Ile Leu Phe Asn Ala Asp Leu Ser Lys Tyr Val Ala His
    210             215             220

Arg Pro Ser Ile Leu His Trp Ile Val Asn Ser Lys Ala Gly Phe Gly
225             230             235             240

Glu Ile Gly Met Gly Leu Leu Arg Ala Ile Arg Pro Trp Asp Gln Trp
            245             250             255

Ile Ala Gly Trp Gly Phe Asp Met Ala Asn Gly Glu Pro Asp Val Ser
        260             265             270

Asp Asp Val Val Leu Glu Gln Ile Arg Thr Leu Val Gly Asp Pro His
        275             280             285

Leu Asp Val Glu Ile Val Ser Arg Ser Phe Trp Tyr Val Asn Arg Gln
    290             295             300
```

Trp Ala Glu His Tyr Gln Ser Gly Arg Val Phe Cys Gly Gly Asp Ala
305   310   315   320

Val His Arg His Pro Pro Ser Ser Gly Leu Gly Ser Asn Thr Ser Met
          325   330   335

Gln Asp Ala Phe Asn Leu Ala Trp Lys Ile Ala Phe Val Val Lys Gly
          340   345   350

Tyr Ala Gly Pro Gly Leu Leu Glu Ser Tyr Ser Pro Glu Arg Val Pro
      355   360   365

Val Gly Lys Gln Ile Val Ala Arg Ala Asn Gln Ser Arg Lys Asp Tyr
      370   375   380

Ala Gly Leu Arg Glu Trp Phe Asp His Glu Ser Asp Asp Pro Val Ala
385   390   395   400

Ala Gly Leu Ala Lys Leu Lys Glu Pro Ser Ser Glu Gly Val Ala Leu
          405   410   415

Arg Glu Arg Leu Tyr Glu Ala Leu Glu Val Lys Asn Ala Glu Phe Asn
          420   425   430

Ala Gln Gly Val Glu Leu Asn Gln Arg Tyr Thr Ser Ser Ala Val Val
          435   440   445

Pro Asp Pro Glu Ala Gly Glu Glu Val Trp Val Arg Asp Arg Glu Leu
      450   455   460

Tyr Leu Gln Ala Thr Thr Arg Pro Gly Ala Lys Leu Pro His Ala Trp
465   470   475   480

Leu Val Gly Ala Asp Gly Thr Arg Ile Ser Thr Leu Asp Val Thr Gly
          485   490   495

Lys Gly Met Met Thr Leu Leu Thr Gly Leu Gly Gly Gln Ala Trp Lys
          500   505   510

Arg Ala Ala Ala Lys Leu Asp Leu Pro Phe Leu Arg Thr Val Val Val
          515   520   525

Gly Glu Pro Gly Thr Ile Asp Pro Tyr Gly Tyr Trp Arg Arg Val Arg
      530   535   540

Asp Ile Asp Glu Ala Gly Ala Leu Leu Val Arg Pro Asp Gly Tyr Val
545   550   555   560

Ala Trp Arg His Ser Ala Pro Val Trp Asp Asp Thr Glu Ala Leu Thr
          565   570   575

Ser Leu Glu Asn Ala Leu Thr Ala Val Leu Asp His Ser Ala Ser Asp
          580   585   590

Asn Gly Asn Pro Ser Gly Thr Asn Glu Pro Gln Tyr Ser Thr Arg Ala
          595   600   605

Val Pro Ile Val Val Pro His Val Thr Ala Glu Asp Ala Ala Pro Ala
    610   615   620

Ser Ala Thr Arg Thr Thr Thr Val Glu Gly Glu Asn Arg
625   630   635

<210> 5
<211> 314
<212> PRT
<213> Rhodococcus sp.

<400> 5
Met Pro Val Ala Leu Cys Ala Met Ser His Ser Pro Leu Met Gly Arg
1   5   10   15

Asn Asp Pro Glu Gln Glu Val Ile Asp Ala Val Asp Ala Ala Phe Asp
    20   25   30

His Ala Arg Arg Phe Val Ala Asp Phe Ala Pro Asp Leu Ile Val Ile
    35   40   45

Phe Ala Pro Asp His Tyr Asn Gly Val Phe Tyr Asp Leu Leu Pro Pro
    50   55   60

Phe Cys Ile Gly Ala Ala Ala Gln Ser Val Gly Asp Tyr Gly Thr Glu
65   70   75   80

Ala Gly Pro Leu Asp Val Asp Arg Asp Ala Ala Tyr Ala Val Ala Arg
         85   90   95

Asp Val Leu Asp Ser Gly Ile Asp Val Ala Phe Ser Glu Arg Met His
         100   105   110

Val Asp His Gly Phe Ala Gln Ala Leu Gln Leu Leu Val Gly Ser Ile
         115   120   125

Thr Ala Val Pro Thr Val Pro Ile Phe Ile Asn Ser Val Ala Glu Pro
    130   135   140

Leu Gly Pro Val Ser Arg Val Arg Leu Leu Gly Glu Ala Val Gly Arg
145   150   155   160

Ala Ala Ala Lys Leu Asp Lys Arg Val Leu Phe Val Gly Ser Gly Gly
         165   170   175

Leu Ser His Asp Pro Pro Val Pro Gln Phe Ala Thr Ala Pro Glu Glu
         180   185   190

Val Arg Glu Arg Leu Ile Asp Gly Arg Asn Pro Ser Ala Ala Glu Arg
         195   200   205

Asp Ala Arg Glu Gln Arg Val Ile Thr Ala Gly Arg Asp Phe Ala Ala
    210   215   220

Gly Thr Ala Ala Ile Gln Pro Leu Asn Pro Glu Trp Asp Arg His Leu
225   230   235   240

```
Leu Asp Val Leu Ala Ser Gly Asp Leu Glu Gln Ile Asp Ala Trp Thr
            245             250             255
```

```
Asn Asp Trp Phe Val Glu Gln Ala Gly His Ser Ser His Glu Val Arg
            260             265             270
```

```
Thr Trp Ile Ala Ala Tyr Ala Ala Met Ser Ala Ala Gly Lys Tyr Arg
            275             280             285
```

```
Val Thr Ser Thr Phe Tyr Arg Glu Ile His Glu Trp Ile Ala Gly Phe
    290             295             300
```

```
Gly Ile Thr Thr Ala Val Ala Val Asp Glu
305             310
```

```
<210> 6
<211> 870
<212> DNA
<213> Rhodococcus sp.

<220>
<221> CDS
<222> (1)..(867)

<400> 6
atg acc cgt cct tac acc agc gtc tgg gac gac ctg aac cag gtc gag    48
Met Thr Arg Pro Tyr Thr Ser Val Trp Asp Asp Leu Asn Gln Val Glu
  1               5                  10                  15

ttc agc cag gga ttc atc cag gcc ggc ccc tac cgg acc cga tac ctg    96
Phe Ser Gln Gly Phe Ile Gln Ala Gly Pro Tyr Arg Thr Arg Tyr Leu
                 20                  25                  30

cac gcc ggc gat tcg tcc aag ccc acg ctg atc ctg ctg cac ggc atc   144
His Ala Gly Asp Ser Ser Lys Pro Thr Leu Ile Leu Leu His Gly Ile
             35                  40                  45

acc ggc cac gcc gag gcg tac gtg cgc aat ctg cgc tcg cat tcc gag   192
Thr Gly His Ala Glu Ala Tyr Val Arg Asn Leu Arg Ser His Ser Glu
    50                  55                  60

cac ttc aac gtc tgg gca atc gac ttc atc ggc cac ggc tat tcg acc   240
His Phe Asn Val Trp Ala Ile Asp Phe Ile Gly His Gly Tyr Ser Thr
 65                  70                  75                  80

aag ccc gac cac ccg ctc gag atc aag cac tac atc gac cag gtg ctg   288
Lys Pro Asp His Pro Leu Glu Ile Lys His Tyr Ile Asp Gln Val Leu
                 85                  90                  95

cag ttg ctg gac gcc atc ggc gtc gag aag gcc tcg ttt tcc ggg gag   336
Gln Leu Leu Asp Ala Ile Gly Val Glu Lys Ala Ser Phe Ser Gly Glu
                100                 105                 110
```

```
tct ctc ggc ggt tgg gtc acc gcc cag ttc gcg cac gac cat ccc gag    384
Ser Leu Gly Gly Trp Val Thr Ala Gln Phe Ala His Asp His Pro Glu
        115             120             125

aag gtc gac cgg atc gtg ctc aac acc atg ggc ggc acc atg gcc aac    432
Lys Val Asp Arg Ile Val Leu Asn Thr Met Gly Gly Thr Met Ala Asn
    130             135             140

cct cag gtg atg gaa cgt ctc tat acc ctg tcg atg gaa gcg gcg aag    480
Pro Gln Val Met Glu Arg Leu Tyr Thr Leu Ser Met Glu Ala Ala Lys
145             150             155             160

gac ccg agc tgg gaa cgc gtc aaa gca cgc ctc gaa tgg ctc atg gcc    528
Asp Pro Ser Trp Glu Arg Val Lys Ala Arg Leu Glu Trp Leu Met Ala
            165             170             175

gac ccg acc atg gtc acc gac gac ctg atc cgc acc cgc cag gcc atc    576
Asp Pro Thr Met Val Thr Asp Asp Leu Ile Arg Thr Arg Gln Ala Ile
            180             185             190

ttc cag cag ccg gat tgg ctc aag gcc tgc gag atg aac atg gca ctg    624
Phe Gln Gln Pro Asp Trp Leu Lys Ala Cys Glu Met Asn Met Ala Leu
        195             200             205

cag gac ctc gaa acc cgc aag cgg aac atg atc acc gac gcc act ctc    672
Gln Asp Leu Glu Thr Arg Lys Arg Asn Met Ile Thr Asp Ala Thr Leu
    210             215             220

aac ggc atc acg gtg ccc gcg atg gtg ctg tgg acc acc aag gac ccc    720
Asn Gly Ile Thr Val Pro Ala Met Val Leu Trp Thr Thr Lys Asp Pro
225             230             235             240

tcc ggt ccg gtc gac gaa gcc aag cgc atc gcc tcc cac atc ccg ggc    768
Ser Gly Pro Val Asp Glu Ala Lys Arg Ile Ala Ser His Ile Pro Gly
            245             250             255

gcc aag ctg gcc atc atg gag aac tgt ggc cac tgg ccc cag tac gag    816
Ala Lys Leu Ala Ile Met Glu Asn Cys Gly His Trp Pro Gln Tyr Glu
            260             265             270

gac ccc gag acc ttc aac aag ctg cat ctg gac ttc ctc ctc ggt cgc    864
Asp Pro Glu Thr Phe Asn Lys Leu His Leu Asp Phe Leu Leu Gly Arg
        275             280             285

agc tga                                                            870
Ser
```

<210> 7
<211> 289
<212> PRT
<213> Rhodococcus sp.

<400> 7
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Met Thr Arg Pro Tyr Thr Ser Val Trp Asp Asp Leu Asn Gln Val Glu
1               5               10              15
```

```
Phe Ser Gln Gly Phe Ile Gln Ala Gly Pro Tyr Arg Thr Arg Tyr Leu
            20                  25                  30

His Ala Gly Asp Ser Ser Lys Pro Thr Leu Ile Leu Leu His Gly Ile
            35                  40                  45

Thr Gly His Ala Glu Ala Tyr Val Arg Asn Leu Arg Ser His Ser Glu
        50                  55                  60

His Phe Asn Val Trp Ala Ile Asp Phe Ile Gly His Gly Tyr Ser Thr
65                  70                  75                      80

Lys Pro Asp His Pro Leu Glu Ile Lys His Tyr Ile Asp Gln Val Leu
                85                  90                  95

Gln Leu Leu Asp Ala Ile Gly Val Glu Lys Ala Ser Phe Ser Gly Glu
            100                 105                 110

Ser Leu Gly Gly Trp Val Thr Ala Gln Phe Ala His Asp His Pro Glu
        115                 120                 125

Lys Val Asp Arg Ile Val Leu Asn Thr Met Gly Gly Thr Met Ala Asn
    130                 135                 140

Pro Gln Val Met Glu Arg Leu Tyr Thr Leu Ser Met Glu Ala Ala Lys
145                 150                 155                 160

Asp Pro Ser Trp Glu Arg Val Lys Ala Arg Leu Glu Trp Leu Met Ala
            165                 170                 175

Asp Pro Thr Met Val Thr Asp Asp Leu Ile Arg Thr Arg Gln Ala Ile
            180                 185                 190

Phe Gln Gln Pro Asp Trp Leu Lys Ala Cys Glu Met Asn Met Ala Leu
        195                 200                 205

Gln Asp Leu Glu Thr Arg Lys Arg Asn Met Ile Thr Asp Ala Thr Leu
    210                 215                 220

Asn Gly Ile Thr Val Pro Ala Met Val Leu Trp Thr Thr Lys Asp Pro
225                 230                 235                 240

Ser Gly Pro Val Asp Glu Ala Lys Arg Ile Ala Ser His Ile Pro Gly
            245                 250                 255

Ala Lys Leu Ala Ile Met Glu Asn Cys Gly His Trp Pro Gln Tyr Glu
            260                 265                 270

Asp Pro Glu Thr Phe Asn Lys Leu His Leu Asp Phe Leu Leu Gly Arg
    275                 280                 285

Ser
```

<210> 8
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic olig OHPR3

<400> 8
atcgaattcg gatccatgac caccacc   27

<210> 9
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic olig OHPR4

<400> 9
atcgcggccg ctctagacta actgcagggc gccaagctcg gcag   44

<210> 10
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic olig C11

<400> 10
atcgaattcg gatccacgag agag   24

<210> 11
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic olig C12

<400> 11
atccggccgc gctctagagt acgcaagct   29

<210> 12
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic olig op1

<400> 12
atcctcgaga ccccgatacc   20

<210> 13
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic olig op2

<400> 13
atcgtcgacc gctaccc   17

<210> 14
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic olig CaMVop2

<400> 14
tccactgacg taagggatga cgcacaatcc cactatcctt cgcaagaccc   50

<210> 15
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic olig CaMVop3

<400> 15
atgctagacg tctagttcag acgctactta tatagaggaa gggtcttgcg   50

<210> 16
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic olig CaMVop4

<400> 16
cgtctagcat tctagttgag gaagttcatt tcatttggag aggac   45

<210> 17
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic olig CaMVopF1

<400> 17
atcgatatct ccactgacgt aag   23

<210> 18
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic olig CaMVopR1

<400> 18
gatggatccg tcctctccaa atga   24

<210> 19
<211> 470
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Promoter

<400> 19
catgcctgca ggtcaacatg gtggagcacg acactctcgt ctactccaag aatatcaaag   60
atacagtctc agaagaccag agggctattg agactttca acaaagggta atatcgggaa   120
acctcctcgg attccattgc ccagctatct gtcacttcat cgaaaggaca gtagaaaagg   180
aagatggctt ctacaaatgc catcattgcg ataaaggaaa ggctatcgtt caagaatgcc   240
tctaccgaca gtggtcccaa agatgtaccc ccacccacga ggaacatcgt ggaaaaagaa   300
gacgttccaa ccacgtcttc aaagcaagtg gattgatgtg atatctccac tgacgtaagg   360
gatgacgcac aatcccacta tccttcgcaa gacccttcct ctatataagt agcgtctgaa   420
ctagacgtct agcattctag ttgaggaagt tcatttcatt tggagaggac   470